

NOTES FOR STUDENTS

Vegetation of British Guiana.—HITCHCOCK³ has given an interesting sketch of the conditions of plant life in British Guiana, with notes on the flora. The climate shows great uniformity of temperature, the mean maximum having the narrow variation of 83° to 87° F., and the mean minimum from 74.5° to 76.5° F. The annual rainfall ranges from 150 inches in the north to 50 inches in the south, with a relatively dry period extending from August to November. Virgin forest covers the greater part of the country, showing many of the characteristics of tropical rain forest, such as stratification, abundance of lianas, buttressed trunks for the larger trees, and great luxuriance. Attention is directed to cleanness of the forest floor due to the destruction of fallen trees and branches by decay and by wood ants. This condition is also accentuated by the scanty growth of low vegetation due to the density and uniformity of the shade. Species of the forest trees are not gregarious, but are scattered here and there.

The flora shows some interesting comparisons with that of the United States. Grasses, sedges, and leguminous plants are about equally abundant in the two regions. Some families common in the United States have here few species, as Fagaceae, Cruciferae, Ranunculaceae, Rosaceae, Labiatae, Umbelliferae, and Compositae. Some familiar families are found in Guiana chiefly as trees, as Euphorbiaceae and Solanaceae. On the other hand, certain families sparsely represented in the United States are found in greatly increased numbers. Notable among these are the Araceae, Palmaceae, Piperaceae, Rubiaceae, Myrtaceae, Lauraceae, Sapotaceae, and Melastomaceae. Orchids reach their highest development on the mountains.—GEO. D. FULLER.

Soil moisture.—As a result of recent investigations, PARKER⁴ presents evidence that the vapor pressure of different moisture contents, the equilibrium relations with seeds, and the freezing point depression due to solid material do not indicate different forms of soil water such as given by the dilatometer method. This would indicate that the old method of classifying soil moisture as hygroscopic, capillary, and gravitational, although open to certain objections, still remains the best available. The opposing view, presented by BOUYOUCOS, has already been noted in this journal.⁵ PARKER's experiments, however, tend to support the views of such modern authorities as RUSSELL and KEEN that all the water present in the soil is subjected to the same law over the whole experimental range, and the various constant and critical points shown by soils at varying degrees of water content are equilibrium values only, and do not indicate any break or abrupt change in the physical condition of the soil moisture.

³ HITCHCOCK, A. S., Floral aspects of British Guiana. Ann. Rept. Smithsonian Inst. for 1919. pp. 293-305. pls. 12. 1921.

⁴ PARKER, F. W., The classification of soil moisture. Soil Science 13:43-54. 1922.

⁵ BOT. GAZ. 73:420. 1922.